

EMSC Connects

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Emergency Medical Services for Children Utah Bureau of EMS and Preparedness

Special points of interest:

- Hyperthermia
- Kids dying in cars, it can happen to good parents
- Peds Readiness project access

Inside this issue:

Pedi Points	2
Excerpt from the Headlines	2
Protocols in Practice	4
News from National	5
Calendar	5
Happenings	6

A Word From Our Program Manager

Summer Greetings! I just returned from one of the most wonderful vacations I have ever taken. I had the opportunity to experience Alaska with my family on an Alaskan cruise and land tour. The state is massive and exceptionally beautiful with rain forests, mountains, lakes, and tundra. The wildlife were everywhere; from humpback and orca whales, sea otters and sea lions, to moose, bear and eagles. This was an absolutely incredible experience. I have to say, it felt so good to experience 60 degree weather in the middle of July and having to wear a jacket when cruising by awe inspiring glaciers or trying to view the elusive Denali. When it was time to come home, the reality set in quickly, as I listened to the weather forecast predicting a week of 100 plus degrees in Utah. Bam! I was back to the hot weather and planning additional summer activities to keep cool.

After returning to work and pushing through the emails, there was one email that caught my eye and seemed very timely for our hot weather reality. [The National Highway Traffic Safety Administration \(NHTSA\)](#) announced the developed of the "Act Fast. Save a Life" campaign. This campaign provides information on the dangers of leaving children in locked cars and how to prevent the occurrence of these tragedies. They stated that car crashes are the number one leading cause of death for children,

followed by heatstroke. Cars are dangerous for children, period, whether they are moving or not! Every 10 days, a child dies from being left in a hot vehicle, according to 2015 data. These deaths can be prevented and NHTSA has developed a campaign with press releases, social media icons, posters and fact sheets that can be used by EMS providers to help spread awareness. The NHTSA communication stated how you could get involved with the program, by:

- Continuing the conversation during the second Twitter chat on August 12 (the first Twitter chat was on July 12) @NHTSAgov using the hashtags #heatstrokeskills and #checkforbaby
- Spreading awareness about what EMS and bystanders can do to save a child's life
- Visiting www.safecar.gov for more information and resources.

Please check out these resources and help us spread the word. As always, thank you for all you do for the children of Utah; stay safe and alert, and stay cool.

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To submit or subscribe to this newsletter

Email: Tdickson@utah.gov

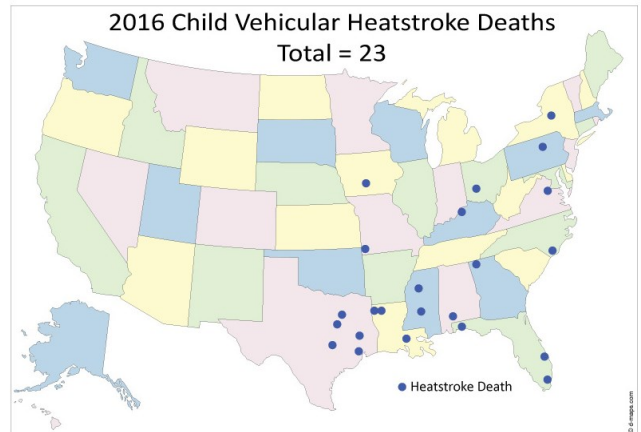
Pedi Points

Tia Dalrymple RN, BSN

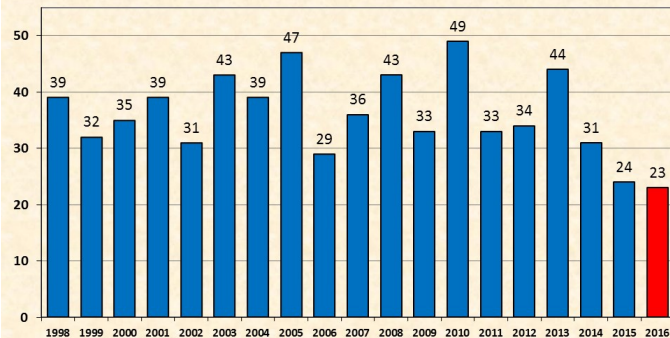
We have focused our newsletter on the subject of hyperthermia and children dying in cars every summer for three years. Since 2013 we have seen a steady decrease in the number of child vehicular heatstroke deaths. However, we are only half way through the year and it look as though we will not be continuing that trend. This is truly one of the most tragic and preventable deaths. Utah had 11 child heat stroke fatalities in cars between 1990 and 2015. We've had 2 near misses this year and 1 death related to heat in a home. Please remember a child's body overheats 3 to 5 times faster than an adult. Even when the windows are cracked, the temperature inside a car can reach 125 degrees in just minutes. Two-thirds of that rise in temperature happens within the first 20 minutes.

An examination of media reports about the 661 child vehicular heatstroke deaths for a 18-year period (1998 through 2015) shows the following circumstances:

- 54% - child "forgotten" by caregiver (356 Children)
- 29% - child playing in unattended vehicle (189)
- 17% - child intentionally left in vehicle by adult (111)
- 1% - circumstances unknown (5)



U.S. Child Vehicular Heatstroke Deaths



Estimated Vehicle Interior Air Temperature v. Elapsed Time

Source: Heatstroke Deaths of Children in Vehicles (<http://noheatstroke.org>)

Elapsed Time	Outside Air Temperature (F)								
	70	75	80	85	90	95	100*	105*	110*
0 minutes	70	75	80	85	90	95	100	105	110
10 minutes	89	94	99	104	109	114	119	124	129
20 minutes	99	104	109	114	119	124	129	134	139
30 minutes	104	109	114	119	124	129	134	139	144
40 minutes	108	113	118	123	128	133	138	143	148
50 minutes	111	116	121	126	131	136	141	146	151
60 minutes	113	118	123	128	133	138	143	148	153
> 1 hour	115	120	125	130	135	140	145	150	155

Excerpt From The Headlines

'Forgotten Baby Syndrome': A Parent's Nightmare of Hot Car Death

ABC News By Nicole Pelletiere Jul 14, 2016

Even the most attentive parents can make a fatal mistake.

For Kristie Reeves, May 25, 2011 was just like any other day in her house, aside from the baby oversleeping.

Her husband, Brett Cavaliero, would bring his 1-year-old daughter, Sophia Rayne "Ray Ray" Cavaliero to day care while his wife, Reeves, prepared for a conference call at home.

But the day would end in tragedy -- one that constantly replays in Reeves' mind as she remembers the accident that took her child's life shortly after her first birthday.

"I tell people she was my soulmate," Reeves, of Austin, Texas said of her daughter. "I know this sounds so cliché, but she really was the perfect child. I remember asking the pediatricians, 'Is it supposed to be this easy?' She was very well-tempered, very balanced.

"My husband never knew he wanted to have kids," she continued. "He was really nervous about being a dad, but after we had Ray, he said, 'When can we have another one?'"

From the Headlines

A Parent's Nightmare

After a 9:43 a.m. wake-up, Reeves said she got Ray Ray fed and ready for day care.

"I walked out to the truck like I would normally do, put her in her car seat and gave her a kiss," Reeves recalled. "I told them I loved them. I gave her a kiss and gave [my husband] a kiss too. He drove down the driveway and I assumed it would be a normal day. It started chaotic, but otherwise normal."

Reeves sent them off and walked back into the house where she began packing for an upcoming business trip. She would later drive to pick up her husband Brett from his office for a lunch date -- something the pair did whenever Reeves traveled for business, she said.

At 1:15 p.m., Reeves met with her husband.

"We were talking about how pretty [Ray Ray] looked that day and how her teacher would be so excited to see her," Reeves said. "She just moved to the 1-year-old caterpillar class. It was tropical day, the class theme. She was wearing the dress her teacher gave her for her birthday."

Amidst the couple's conversation, Reeves pulled into a restaurant parking lot. She said she had noticed how quiet her husband became when they began talking about their daughter.

"I didn't even get the car turned off and he said, 'Just go back to the office. Please go back to the office immediately.'" Reeves recalled. "I thought he had forgotten something and I said, 'OK, whatever.' I turned the car around got to the red light and he said, 'Run the light.'"

"I asked him, 'What's going on?' and then he told me: 'I can't remember dropping Ray Ray at day care this morning.'"

Panicking, Reeves said she "floored" the gas in her car -- running lights, driving on the sidewalk and even the wrong way on the exit ramp in order to get back to Cavaliero's office. On the way, the couple called Ray Ray's day care center who confirmed the child wasn't in class.

Reeves said her husband called his office manager, who was asked to check his truck. Reeves dialed 9-1-1 and beat the first responders to the devastating scene.

Ray Ray, who had been forgotten in the backseat, had been removed from the truck and was unresponsive.

The temperature had been 94 degrees that day. Ray Ray was left in the truck from 10:30 a.m. until around 1:27 p.m. according to phone records, Reeves said.

"I just remember screaming to the [9-1-1] lady that her lips were purple," Reeves said. "You can hear me on the 9-1-1 call saying, 'Hurry! She's just a baby.' I've listened to the 9-1-1 call and you can hear me make this unearthly shriek that came from my body. It was the sound of horror when seeing her for the first time."

Reeves said she attempted CPR on Ray Ray until ambulance arrived 13 minutes later. A team worked on her for 40 minutes before transporting her to a local children's hospital. Doctors unsuccessfully attempted to open an airway three times. On the fourth time, Ray Ray was intubated, but it was too late, Reeves said.

Five years following her daughter's death, Kristie Reeves has dedicated her life to raising awareness of child vehicular heatstroke through her organization, [Ray Ray's Pledge](#).

On September 1, 2015, "Ray Ray's Law" was passed in Texas, which will mandate hospitals across the state to educate new parents on the dangers of hot car-related accidents and deaths. Hospitals will hand out pamphlets and teddy bear key chains to mothers and fathers as a reminder that they're not riding alone in the car.

Today, Reeves is the mother of 3-year-old twin girls.

"We thought that this was a freak accident," she said of her tragedy. "[I thought], 'How could we be so dumb as parents?' When I started reading these stories that sounded so much like ours, I just got so mad. The need for justice for my child is what drives me to continue Ray Ray's Pledge because I made a commitment to her that I was going to do everything in my power to make sure that her short life was not going to be just a horrible statistic. I will do everything to make sure this will never happen to any other babies, or families."



"There are good, attentive, loving parents that lose awareness that their child is in the car"



To ensure her other daughters are safely dropped at school or home, Reeves uses an Android app called "Mom I Am Here". The app sends out multiple reminders and features an automated texting function, which alerts your contacts in the event of an emergency. It also allows the other driver to send a confirmation that the child has been picked up or dropped off.

Protocols in Practice

Hyperthermia

Definition: Hyperthermia is the decreased ability of a patient's body to regulate a response to high environmental temperatures. This is often associated with dehydration.

Clinical Presentation: *Heat Exhaustion:* Moist, cool skin, cramping, slightly elevated or normal temperature or nausea. *Heat Stroke:* Hot, dry skin, altered mental status, dilated pupils, tachycardia, seizure activity, elevated body temperature, or arrhythmias.



“Enlist parents help in taking the temperature, PCH recommends rectal temps on children less than 1yr. Under the arm and oral are preferred for older children”

Fahrenheit	Celsius
98.6	37
100.4	38
102.5	39
104.0	40
105.8	41

Basic Life Support

1. Remove patient from hot environment
2. Perform a General Pediatric Assessment
3. Maintain airway, administer 10-15 lpm of oxygen via NRB
4. Begin BVM ventilation with 100% oxygen for:
 - A. Ineffective respiratory effort
 - B. Heart rate < 80 for infants or <60 for children
 - C. Cyanosis despite 100% oxygen via NRB
 - D. Decreased level of consciousness
5. Obtain history and document temperature
6. Passive cooling measures: cool environment, fan, ice packs, remove clothing
7. Oral rehydration with electrolyte solution if mental status is normal
8. Transport for medical evaluation

Advanced Life Support

1. Follow BLS Procedures
2. Place on cardio-respiratory monitor and continuous pulse oximeter assess for arrhythmias
3. Intubate if unable to adequately ventilate or oxygenate child by BVM
4. IV/IO Initiate IV fluids 20ml/kg
5. Assess for seizure activity
6. Transport for medical evaluation

Key Points

1. Move patient from hot environment to shade
2. Remove excess clothing
3. Mortality from heat stroke is usually from dysrhythmia. It is important to recognize early and treat
4. The head is a good location to administer cooling measures
5. Enlist parents help in taking the temperature. PCH recommends rectal temps on children less than 1yr. Under the arm and oral are preferred for older children. Skin probe temperatures do not provide the best accuracy.

QUALITY IMPROVEMENT ASSESSMENT OPPORTUNITY!



Based on the success of the initial assessment for the National Pediatric Readiness Project* conducted in 2013-14, the web-based “portal” is once again open for local hospitals to assess their score and their readiness to care for children.

Key points for hospitals accessing their pediatric readiness:

The Assessment Portal (www.pedsready.org):

- Uses the same interface as in 2013-14; ED personnel can select their state and county in which their hospital is located, and then choose their hospital.
- If a hospital’s name does not appear in the portal, it can be added by following the instructions provided on the website.
- Upon completion of the assessment, respondents will receive an electronic gap analysis report containing their new Readiness Score, compared to their 2013-14 Readiness Score (if applicable), as well as a breakdown of the overall scoring.
- The assessment will be **open until the end of August**.

Please visit www.pedsready.org,
to see how your quality
improvement efforts are helping
to improve care for children!



August 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3 EMSC Staff mtg	4	5 PEPP Tuba City →	6
7	8	9	10	11	12	13
14	15	16	17 EMSC Advisory Board TGR	18	19	20
21	22	23	24	25	26 PEPP Logan →	27
28	29	30	31			

Pediatric Education Around the State

Pediatric Grand Rounds (PGR) are educational/CME offerings webcast weekly (Sept-May). You can watch live or archived presentations. It is geared towards hospital personnel, but will certify as BEMSP CME. While they are on break for the trauma season, archive presentations can be accessed at <https://intermountainhealthcare.org/locations/primary-childrens-hospital/for-referring-physicians/pediatric-grand-rounds/>

Trauma Grand Rounds (TGR) This free offering alternates with EMS Grand Rounds every other month, it is geared towards hospital personnel.

Aug 18th Trachea Trauma – Brian McRae, MD

There are 3 ways to participate

- Attend in person 0700-0800 Classroom A SOM University Hospital.
- Attend live via the internet at : <http://utn.org/live/trauma/> To receive CME for viewing via live stream, please send an email with your name and the presentation you viewed to zachery.robinson@hsc.utah.edu. A CME certificate will be emailed to you within two weeks.
- View the archived presentation two weeks after the live date.

at www.healthcare.utah.edu/trauma

Upcoming Peds Classes, 2016

For PEPP and PALS classes throughout the state contact Andy Ostler Aostler@utah.gov

Initial PEPP classes

Aug 5-6, 2016 Tuba City, Arizona Friday 6-10 - Saturday 8 -5

August 26-27, 2016 Logan, Utah Friday 6-10 - Saturday 8-5.

Renewal PEPP classes

For PALS and ENPC classes in Filmore, Delta and MVH contact Kris Shields at shields57@gmail.com

Save the Date

September 8, 2016 Milford Memorial Hospital Health Fair

September 9, 2016 [Utah Trauma Network Conference](#)

September 9-10, 2016 [Eastern Utah Emergency Services Symposium](#)

October 6-7, 2016 [Issues in Pediatric Care Conference](#)



Emergency Medical Services for Children

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Follow us on the web
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and on Twitter: EMSCUtah

The Emergency Medical Services for Children (EMSC) Program aims to ensure that emergency medical care for the ill and injured child or adolescent is well integrated into an emergency medical service system. We work to ensure that the system is backed by optimal resources and that the entire spectrum of emergency services (prevention, acute care, and rehabilitation) is provided to children and adolescents, no matter where they live, attend school or travel.

Happenings

